



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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January 13, 1992

Ms. Cindy Emmons
Director, Environmental Affairs
Kennecott Utah Copper Corporation
P.O. Box 525
Bingham Canyon, Utah 84006-0525

Cindy

Dear Ms. Emmons:

Re: Review of Bluewater I Repository Installation and Reclamation Plan, Bingham Canyon Mine, Kennecott Utah Copper, M/035/002, Salt Lake County, Utah

The following review comments address the Bluewater I Repository plan submitted by Kennecott July 17, 1991. Recognizing that the construction and use of this repository is nearly complete, most of our comments are oriented toward final reclamation of the facility. Our review comments are prepared according to the pertinent section of the Minerals Rules. Please prepare your response accordingly.

R613-004-105 - Maps, Drawings and Photographs

105.2.12 - Border outlining acreage

The operator needs to establish a figure for the amount of acreage to be disturbed by this disposal facility. The acreage should correspond to the information provided on the maps. - HWS

105.3 - Slopes, roads, pads, impoundment, ponds, maps, etc.

Map(s) indicating the location of borrow areas to be used for clay liners, topsoil, etc., must be made part of the plan. Also, please indicate the volume of materials to be used, and the extent of disturbance associated with the borrow areas (acreage). - AAG & HWS

Sheet 2 of 3, DWG no 451-T-506 shows 34 feet of clayey soil while the plan states 36 inches. Please clarify this discrepancy. - AAG

R613-004-109 - Impact Assessment

109.1 - Surface & groundwater systems

What type of "corrective action plan" will be implemented in the event that lead and arsenic seepage/leachate exceeds acceptable effluent limits/standards? - DWH

109.4 - Slope stability, erosion control, air quality, public health & safety

Will the 3:1 slope of the repository be covered only by 12" of clay and the geotextile? Sheet 2 of 3, section A-A, doesn't show anything else. The depth of soil material will be insufficient for effective plant establishment and therefore ineffective for long term (final reclamation) erosion control. - AAG & HWS

R613-004-110 - Reclamation Plan

110.4 - Treatment, location and disposition of deleterious materials

The plan indicates that any leachate generated from the repository will discharge through the flow measurement system, then into the Bluewater I canal. Is this canal lined? The MTL then flows via lined canal into the east head reservoir. Is this reservoir lined? (see DWG #453-T-161) - AAG

110.5 - Revegetation planting program and topsoil redistribution

The plan states, on the page describing revegetation, that drill seeding will be performed at a depth of 3 inches. This is an excessive depth for most species. Please adjust this depth in your plan narrative to 1/4 - 1/2 inches in depth. Also, the revegetation will only need to be monitored initially for three years. At that time, a determination will be made concerning the need for further seeding and/or continued monitoring. - HWS

The operator needs to develop a discussion concerning reclamation of the topsoil and clay borrow areas and their reclamation. - HWS

110 - Time frames for reclamation

What is the anticipated date for completing this project? What time frames have been established for phased completion of the project? - AAG

R613-004-111 - Reclamation Practices

111.4 - Deleterious material safely removed or isolated

The plan indicates that monitoring of the seepage collection system will be ongoing. The plan does not indicate how long monitoring will continue. What will happen when this collection system is finally sealed off? No closure or post-closure plan currently exists. - HWS

The plan indicates that an annual percolation rate of .2"/yr has been established for water moisture infiltrating the clay cap. Will this create a problem of leachate build-up over time? Why or why not? - HWS

Also, see comment under R613-004-109.1 - DWH

111.8 - Roads and pads when no longer needed

Will road access to the site be maintained indefinitely? - AAG

Will the 24" culvert remain to bypass surface runoff under access road at the base of repository? What size storm is this culvert sized for? What are the long-term maintenance provisions for this culvert if it is to remain? What are the long-term monitoring provisions for the 4" seepage control pipe? - DWH

111.9 - Dams and Impoundments

Will diversion structures associated with the impounding structure be sized for the 100 yr storm event?

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R613-004-113 - Surety

What are the anticipated costs for decommissioning, reclamation, maintenance and monitoring, associated with this project? - DWH

If possible, please provide your response to these comments no later than March 6, 1992. Thank you for giving us the opportunity to provide comment on this plan and for keeping us apprised of your mining-related activities. We look forward to working with you in the future on this and similar project proposals.

Sincerely,



Lowell P. Braxton
Associate Director, Mining

jb
cc: Kent Gray, DERR
Don Ostler, DWQ
Minerals staff
M035002.2